



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|------------------------------|------------------------|
| 10/621,325 | 07/18/2003 | Leif Johannsen | 45900-000761/US | 2522 |
| 30593 7590 05/15/2007 HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195 | | | EXAMINER GESESSE, TILAHUN | |
| | | | ART UNIT 2618 | PAPER NUMBER |
| | | | MAIL DATE 05/15/2007 | DELIVERY MODE PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|---------------------------------------|---|--|
| Office Action Summary | Application No. 10/621,325 | Applicant(s) JOHANNSEN ET AL. | |
| | Examiner Tilahun B. Gesesse | Art Unit 2618 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-39, 41, 42, 55, 57-59 and 61-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-39, 41, 42, 55, 57-59 and 61-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date <u>12/4/06</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 22-39,41-42,55,57-59,61-63 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 22-30,36-39,42,55,57-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori in view of Saarinen (US 6,882,335)

Claims 22,55 Mori teaches a mobile handset (see fig.4) comprising:

-Mori teaches a handset housing comprising a front and a back cover, (front cover 206, and back layer of plastic type cover, 221, see fig.1 6 and pg. 2,paragraph 0034-0035)

- Mori teaches - display means being visible from the front cover side of the handset housing, the display means being adapted to provide visual information to a user of the mobile handset, [see fig.4 pg. 2, paragraph 0034].

-Mori teaches a plurality of Loudspeakers being adapted to generate audio signals [see page 2,para 0034].

Art Unit: 2618

Mori does not teach stereo signal and an image compensation unit to allow the mobile handset to be applied in near-to-the-eye applications.

However, Saarinen teaches an image compensation unit to (view mod) allow the mobile handset to be applied in near-to-the-eye applications (see column 17, lines 20-65 and figure 15), in which Saarinen teaches the mobile handset to be applied in the near to the eye to compensate (viewing angle modification circuitry 306 and orientation sensor 308) provides the view angle of the display. Further more, Saarinen teaches stereo signal (see column 12, lines 47-64).

It would have been obvious to an artisan of ordinary skill in the art at the time of the invention was made to produce stereo sound and compensate view angle modification circuitry and orientation sensor in Mori system, as evidenced by Saarinen, in order to optimize stereo sound at loudspeakers and the view of the display at an angle and orientation with respect to the user position.

Claim 23, Mori teaches each of the plurality of loudspeakers comprises a magnetic circuit comprising a magnet, the magnetic circuit having at least one gap defined between two opposed and substantially parallel surfaces of the magnetic circuit, the magnet of the magnetic circuit causes a magnetic field to exist across the at least one gap, wherein the magnetic circuit defines magnetic return paths completely encircling the gap [see pg 2 paragraph 0038-pg. 3 paragraph 0045 and figs. 8-9).

Claims 24,57 Mori teaches the display means is a color display (see fig.5 and its disclosure]

Art Unit: 2618

Claims 25-27, Mori and Saarinen teach as explained above in claim 22, Mori further teaches the plurality of Loudspeakers are arranged within the handset housing so that the audio signals are transmitted from the front cover of the handset housing [see fig. 4].

Claim 28 , Mori and Saarinen teach as explained above in claim 22, Mori teaches the plurality of Loudspeakers comprise loudspeaker front covers each having at least one acoustic opening arranged so that the audio signals are transmitted primarily in a direction being parallel to a mean plane defined by the Loudspeaker front cover[see pg. 2 paragraph 0034-page 3 paragraph 0045).

Claims 29,58-59. Mori teaches two loudspeakers are arranged at two opposing sides of the display means [see fig. 8 231 and 232 are considered two opposite sides].

Claim 30. Mori teaches a third speaker is positioned between the two oppositely arranged Loudspeakers and at a third side of the display means (see figure 6).

Claim 36, Mori teaches vibration means so as to mechanically vibrate the mobile handset in accordance with a vibration signal provided to the vibration means (abstract).

Claims 37-39, Mori teaches a number of drivers for driving the Loudspeaker (see pg. 2, paragraph. 0034-pg. 3 paragraph. 0045)).

Claim,42 the mobile handset is a mobile phone, [see fig.4).

4. Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori and Saarinen in view of Saiki et al (US 2003/0003945A1).

Claims 31 . Mori and Saarinen do not teach a movable diaphragm. However, Saiki teaches a movable diaphragm (abstract). Mori, Saarinen and Saiki teach speaker using technique of magnet, then , it would have been obvious to an artisan of ordinary skill in the art at the time of the invention was made to use diaphragm in Mori and Saarinen system , as taught by Saiki , in order to separate the sound reproduce from having an effect of quality of the loudspeakers.

5. Claims 32-35,61-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori and Saarinen in view of Smethers (US 6,463,304).

Claims, 32-35,61-63, Mori does not expressly teach a navigation key accessible from the back cover side of the handset housing, selecting information displayed on the display means upon moving the navigation key from an initial position to a select position.

However, Smethers teaches a navigation key accessible from the back cover side of the handset housing, select position (column 3, lines 60-68 and column 4, lines 19-42 and figure 1). Mori and Smethers teach similar area of endeavor, then, it would have been obvious to an artisan of ordinary skill in the art at the time of the invention was made utilize a pointer or navigating key in the Mori and Saarinen system , as taught by Smethers, in order to easy access the keys at the soft navigating key on the display rather than another step attempting to manipulate cumbersome dialing keys.

Claim 41 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mori and Saarinen in further view of Komura (US 2004/0023697)

6. Claim ,41, Mori and Saarinen do not teach the means for enhancing the stereo reproduction comprises cross talk cancellation.

However, Komura teach means for enhancing the stereo reproduction comprises cross talk cancellation (see paragraph 0206 and figure 22 (b)).

Then , it would have been obvious to an ordinary skill in the art to cancel cross talk sound, in order to loud speakers reproduce or output stereo or quality sound for the user or noise produce due to cross talk at the device being eliminated by the canceller.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2618

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tilahun B Gesesse whose telephone number is 571-272-7879. The examiner can normally be reached on flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 571-272-7899.

The Central FAX Number is 571-273-8300. For patent related correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number .

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TG

April 10, 2007


TILAHUN GESESSE
PRIMARY EXAMINER 